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## VERIFICATION OF TRANSLATION

I Wei-Te Chung, a registered patent agent before US Patent and Trademark Office (registration number: 43,325) who have proficient knowledge of both English and Chinese, state that the translation of the priority document of Taiwan Patent Application No. 091136950 is accurate to its original language.

Translator: 

(Wei Te Chung)

Date: 

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Translation of Taiwan Patent Application No. 091136950

**Title**

BUDGET AND FINANCIAL ANALYSIS SYSTEM AND METHOD

**Abstract of the Invention**

A budget and financial analysis system is provided. The system includes a financial ratio maintaining device, a calculating module, and a statement generating module. The financial ration maintaining device is used for maintains financial ratio information, which includes financial ratio items and formulas. The calculating module is used for retrieving actual balances and budget balances of accounts, for retrieving the financial ratio items and the formulas from the financial ratio maintaining device, and for calculating financial ratios. The statement generating module 28 generates statements according to predefined statement templates and particular terms set by respective users. The system further includes a budget module for budgeting all kinds of fees and costs, and for setting budget information of accounts and maintaining budget columns of accounts

**Description of the Invention****【Field of the Invention】**

The present invention relates to a financial analysis system and method, and particularly to a budget and financial analysis system and method.

**【Background of the invention】**

Efficient financial management is vital for vast multinational manufacturing corporations. The object of financial statement analysis is to assess the present financial situation and business performance, and to forecast the future financial situation and business performance. Financial budget analysis examines the differences between actual expenses and budgeted expenses, in order to improve budget-making capabilities. Financial statement analysis and financial budget analysis are essential tools for enterprise decision-makers. There is vast range of financial budget and analysis software available in the marketplace. However, these programs are generally not flexible enough when calculating financial ratios, and lack adequate functions for comparing actual expenses with budgeted expenses.

Computer-aided financial management systems are disclosed in a number of patents. U.S. pat. Publication Ser. No. 4,953,085 issued on Aug. 28, 1990 and entitled "System for the Operation of a Financial Account" discloses a system for users to define and show their financial objectives, risks preferences, and financial forecasts and budget limitations, in addition to providing loan account management. The system can help users monitor statuses of their assets and liabilities. However, the system does not provide the functions of financial ratio analysis and comparison between actual and budgeted expenses.

**【Summary of the Invention】**

Accordingly, a main objective of the present invention is to provide a budget and financial analysis system and method, whereby users can define financial ratio analysis items and formulas to satisfy their own requirements.

Another objective of the present invention is to provide a budget and

financial analysis system and method, which can provide budget management functions and statements comparing budgets with actual expenses.

A further objective of the present invention is to provide a budget and financial analysis system and method, which can connect to other external financial systems and retrieve needed information therefrom automatically, so as to reduce manual input and improve accuracy of information.

To accomplish the above objectives, a budget and financial analysis system of the present invention is provided. The system connects with other external financial system for retrieving needed information automatically, and includes a plurality of client computers for providing user interface for inputting and retrieving related information, an application server, and a database. The application server includes: an authority managing module for setting user information and authorities; a basic information maintaining module for newly adding, modifying, searching and deleting all kinds of basic information; a new account setting module for setting and maintaining accounts' initial balances; a journal voucher registering module for registering journal vouchers; a carrying forward module for automatically carrying forward accounts and data of journal vouchers to corresponding accounts of a ledger; a calculating module for calculating actual balances; and a statement generating module for generating statements according to predefined statement templates and particular terms set by respective users.. The database stores all kinds of data generated during the above-described processes. The client computers are connected to the application server through an electronic network. The application server is connected to the database through a connection.

Further, the present invention provides a budget and financial analysis

method, which can retrieve needed information from other external financial systems automatically. The method includes the steps of: (a) maintaining basic information through a user interface; (b) determining whether the system is being run for the first time, if it is, setting each account's initial balance by way of inputting corresponding data manually; if not, directly executing step (c); (c) inputting accounts and data to corresponding columns of journal vouchers; (d) calculating financial ratios; and (e) generating corresponding statements.

The present invention provides a budget and financial analysis system and method, which can connect with other external financial systems for retrieving needed information automatically thereby reducing manual input and improving working efficiency and accuracy of information. In addition, the present invention also provides functions of automatic expenses apportionment, and generating registers correspondingly. The budget and financial analysis system further generates all kinds of personal statements according to user requirements.

#### 【Embodiments of the Invention】

FIG. 1 is a schematic diagram of hardware infrastructure of a budget and financial analysis system in accordance with the preferred embodiment of the present invention. The budget and financial analysis system comprises a plurality of client computers 10, an application server 12, and a database 14. The client computers 10 are connected to the application server 12 through an electronic communications network 11, and the application server 12 is connected to the database 14 through a connection 13. The network 11 is an electronic network, which may be the Internet, an Intranet, or any suitable communication networks. The connection 13 is a

database connectivity such as an Open Database Connectivity (ODBC) or a Java Database Connectivity (JDBC). Each client computer 10 provides an interactive user interface for users to maintain and set basic information and view statements. The application server 12 comprises a plurality of software function units (described in detail below in relation to FIG. 2) for retrieving data from the client computers, analyzing and processing the data and displaying processed results through the client computers 10. The database 14 stores all kinds of data generated during the above-described processes.

FIG. 2 is a schematic diagram of main function units of the budget and financial analysis system. The budget and financial analysis system comprises an authority managing module 20, a basic information maintaining module 21, a new account setting module 22, a journal voucher registering module 23, a carrying forward module 24, a transferring module 25, a calculating module 26, a budget module 27, and a statement generating module 28. The authority managing module 20 is used for setting user authorities. Each user is allocated specific accessing and operating authorities.

The basic information maintaining module 21 is used for maintaining all kinds of basic information, including by way of adding, modifying, searching and deleting basic information.

The new account setting module 22 is used for setting and maintaining a new account's initial balance.

The journal voucher registering module 23 is used for registering journal vouchers according to source materials generated during business activities. A journal voucher is a kind of voucher that is designed by an enterprise itself to record business activities by entry of information

according to source materials. The journal voucher typically records accounting parameters including dates, accounts, balances, exchange rates, currencies, totals, ID numbers and quantities of corresponding source materials, persons in charge, and auditors.

The carrying forward module 24 is used for automatically carrying forward accounts and data from other external financial systems. The external financial systems include a receivables managing system, an account payable managing system, a bill managing system, and a fixed assets managing system, etc.

The transferring module 25 is used for automatically transferring the accounts and data of journal vouchers to corresponding accounts of a ledger, and generates debit or credit balances of accounts that are stored in the database 14.

The calculating module 26 is used for calculating financial ratios. The calculating module 26 retrieves actual balances, budget balances of accounts, financial ratio items and formulas, and calculates financial ratios required by users.

The budget module 27 is used for setting budget information and maintaining budget columns of accounts. The budget information may for example include budget periods, budget items, and accounts. If there is an external budget system, the budget module 27 automatically obtains budget data from the external budget system, and enters the budget data to budget columns of corresponding accounts. If there is no external budget system, a user manually inputs budget data to budget columns of corresponding accounts.

The statement generating module 28 generates statements according to predefined statement templates and particular terms set by respective users.

The terms set by a user may be account segments or account groups. For example, the statement generating module 28 can generate a financial statement of a department by way of collecting balances of accounts whose segment represent the department. Another example is, when an expense comparison statement comparing expenses between departments is needed, the statement generating module 28 selects the group that represents the selected expense, and then collects balances of accounts whose third segments represent a certain department. In this way, the statement generating module 28 retrieves the expense of each department, and generates the expense comparison statement.

FIG. 3 is a schematic diagram of constitutions of the basic information maintaining module 22. The basic information maintaining module 22 comprises and executes a period setting device 210, an account maintaining device 211, an account group maintaining device 212, a financial ratio maintaining device 213, a budget information maintaining device 214, and a statement template maintaining device 215. The period setting device 210 is used for setting accounting periods. This allows a user to define a particular financial period to generate an individualized statement. The accounting period may for example be a monthly or quarterly period, or a calendar or fiscal year. The account maintaining device 211 is used for maintaining accounts, account structures, and account segments. Said accounts include two columns: one for actual balances and one for budget balances. Each account structure is a relationship between a main account and one or more subsidiary accounts. Each subsidiary account is controlled by the main account. For example, the main account may be accounts payable, and a subsidiary account may be the account payable of a particular supplier. An account segment refers to a configuration of an account.



Customarily, an account can be divided into four segments, and each segment can be designated with a different number in accordance with different needs. For example, a user may define the first segment as a main account, the second segment as a subsidiary account, the third segment as a department code, and the fourth segment as a product code. The account group maintaining device 212 is for grouping accounts according to main accounts or subsidiary accounts. When grouping is based on main accounts, the group includes at least one main account. When grouping is based on subsidiary accounts, the group includes at least one subsidiary account. The financial ratio maintaining device 213 maintains financial ratio information, which includes financial ratio items and formulas. The budget information maintaining device 214 is used for maintaining all kinds of budget values of costs and expenses. The statement template maintaining device 215 maintains types and forms of statements. The types of statements mainly include balance sheets, consolidated balance sheets, consolidated profit and loss accounts, consolidated cash flow statements, key ratio statements, real-budget comparison statements, expense comparison statements, profit comparison statements, etc.

FIG. 4 is a flowchart of a preferred method for implementing the budget and financial analysis system of the present invention. In step S30, the basic information maintaining module 21 sets and maintains basic information such as accounting periods, accounts, account groups, financial ratios, budget information, and statement templates. The basic information as set is stored in the database 14, and can be searched by any user through any client computer 10. In step S31, a user determines whether the system is being run for the first time. If the system is not being run for the first time, the procedure goes directly to step S33 described below. If the

system is being run for the first time, in step S32, the new account module 22 sets each new account's initial balance by way of inputting corresponding data manually, whereupon the procedure goes to step S33. In step S33, the user determines whether there is an external financial system. If there is an external financial system, in step 34, the journal voucher registering module 23 automatically obtains accounts and data from the external financial system, and enters the accounts and data to corresponding columns of journal vouchers. If there is no external financial system, in step S35, the user manually inputs accounts and data to corresponding columns of journal vouchers according to source materials. After that, in step 36, the carrying forward module 24 automatically carries forward accounts and data of journal vouchers to corresponding accounts of a ledger, and generates debit or credit balances of accounts that are stored in the database 14. In step S37, the calculating module 26 retrieves actual balances and budget balances of accounts from the database 14, retrieves financial ratio items and formulas from the financial ratio maintaining device 213, and calculates financial ratios required by the user. In step S38, the statement generating module 28 generates actual statements and budget statements according to predefined statement templates and particular terms set by respective users. The terms set by a user may be account segments or account groups. The actual statements are generated according to actual balances of accounts as described above. The budget statements are generated according to budget balances of accounts as described above. The statements can be displayed to the user through the interface of the relevant client computer 10, stored in the database 14, and printed. Finally, in step S39, the statement generating module 28 generates comparison statements according to the actual statements and the budget statements.

FIG. 5 is a flowchart of a preferred method for implementing financial ratios analysis method of the present invention. In step S40, the basic information maintaining module 21 sets and maintains basic information such as accounting periods, accounts, account groups, financial ratios, budget information, and statement templates. The basic information as set is stored in the database 14, and can be searched by any user through any client computer 10. In step S41, the financial ratio maintaining device 213 maintains financial ratio information, which includes financial ratio items and formulas. In step S42, a user determines whether the system is being run for the first time. If the system is not being run for the first time, the procedure goes directly to step S44 described below. If the system is being run for the first time, in step S43, the new account module 22 sets each new account's initial balance by way of inputting corresponding data manually, whereupon the procedure goes to step S44. In step S44, the user determines whether there is an external financial system. If there is an external financial system, in step 45, the journal voucher registering module 23 automatically obtains accounts and data from the external financial system, and enters the accounts and data to corresponding columns of journal vouchers. If there is no external financial system, in step S46, the user manually inputs accounts and data to corresponding columns of journal vouchers according to source materials. After that, in step 47, the carrying forward module 24 automatically carries forward accounts and data of journal vouchers to corresponding accounts of a ledger, and generates debit or credit balances of accounts that are stored in the database 14. In step S48, the calculating module 26 retrieves actual balances and budget balances of accounts from the database 14, retrieves financial ratio items and formulas from the financial ratio maintaining device 213, and calculates

financial ratios required by the user. In step S49, the calculating module 26 calculates financial ratio results according to financial ratio items and balances of other items selected by the user. The financial ratio results are stored in the database 14. Finally, in step S410, the statement generating module 28 generates financial ratio statements according to predefined statement templates and particular terms set by respective users. The statements can be displayed to the user through the interface of the relevant client computer 10, stored in the database 14, and printed.

Although the present invention has been specifically described on the basis of a preferred embodiment and preferred method, the invention is not to be construed as being limited thereto. Various changes or modifications may be made to the embodiment and method without departing from the scope and spirit of the invention.

#### 【Description of the Drawings】

FIG. 1 is a schematic diagram of hardware infrastructure of a budget and financial analysis system in accordance with the preferred embodiment of the present invention;

FIG. 2 is a schematic diagram of main function units of an application server of the budget and financial analysis system of FIG. 1;

FIG. 3 is a schematic diagram of constitutions of the basic information maintaining module;

FIG. 4 is a flowchart of a preferred method for implementing the budget and financial analysis system of the present invention; and

FIG. 5 is a flowchart of a preferred method for implementing financial ratios analysis method of the present invention.

**【Labels of the Main Components】**

Client computer	10
Network	11
Application server	12
Connection	13
Database	14
Authority managing module	20
Basic information maintaining module	21
Period setting device	210
Account maintaining device	211
Account group maintaining device	212
Financial ratio maintaining device	213
Budget information maintaining device	214
Statement template maintaining device	215
New account setting module	22
Journal voucher registering module	23
Carrying forward module	24
Transferring module	25
Calculating module	26
Budget module	27
Statement generating module	28

## Claims

1. A budget and financial analysis system, in which users can define their own financial ratio analysis items and formulas, the budget and financial analysis system comprising:

a plurality of client computers, each of the client computers providing a user interface for inputting and displaying data;

an application server comprising:

an authority managing module for setting and managing user data and user authorities;

a basic information maintaining module for adding, modifying, searching and deleting basic information;

a journal voucher registering module for registering journal vouchers according to source materials generated during business activities;

a carrying forward module for automatically carrying forward accounts and data of journal vouchers to corresponding accounts of a ledger, and generating debit or credit balances of accounts;

a budget module for setting budget information of accounts and maintaining budget columns of accounts;

a calculating module for calculating financial ratios; and

a statement generating module for generating statements according to predefined statement templates and particular terms set by respective users;

a database for storing information;

wherein the client computers connect with the application server through an electronic network, and the application server connects with the database through a database connectivity.

2. The budget and financial analysis system according to claim 1, wherein

the basic information maintaining module comprises a period setting device for setting accounting periods.

3. The budget and financial analysis system according to claim 1, wherein the basic information maintaining module comprises an account maintaining device for maintaining accounts.

4. The budget and financial analysis system according to claim 1, wherein the basic information maintaining module comprises an account group maintaining device for grouping accounts.

5. The budget and financial analysis system according to claim 1, wherein the basic information maintaining module comprises a statement template maintaining device for maintaining types and forms of statements.

6. The budget and financial analysis system according to claim 1, wherein the external financial systems include a receivables managing system, an account payable managing system, a bill managing system, and a fixed assets managing system.

7. A budget and financial analysis method, comprising the steps of:

(a) setting basic information through a user interface;

(b) determining whether the system is being run for the first time, setting each account's initial balance by way of inputting corresponding data manually if the system is being run for the first time, and directly executing step (c) if the system is not being run for the first time;

(c) determining whether there is an external financial system for providing financial information;

(d) obtaining accounts and data from the external financial system and entering the accounts and data to corresponding columns of journal vouchers automatically, if there is an external financial system;

(e) inputting accounts and data to corresponding columns of journal

vouchers according to source materials, if there is no external financial system;

(f) carrying forward accounts and data of journal vouchers to corresponding accounts of a ledger;

(g) calculating financial ratios;

(h) generating an actual statement and a budget statement; and

(i) generating a comparison statement according to the actual statement and the budget statement.

8. The method according to claim 5, wherein the step (a) comprises the step of: maintaining other basic information and financial ratio information.

9. The method according to claim 8, wherein the step of maintaining other basic information comprises the step of setting accounting periods.

10. The method according to claim 8, wherein the step of maintaining other basic information comprises the step of maintaining accounts, account structures, and account segments.

11. The method according to claim 8, wherein the step of maintaining other basic information comprises the step of grouping accounts according to main accounts or subsidiary accounts.

12. The method according to claim 7, wherein the step (h) comprises the step of setting terms of the statements through a user interface.

13. The method according to claim 7, wherein the step (h) comprises the step of generating financial ratio statements.



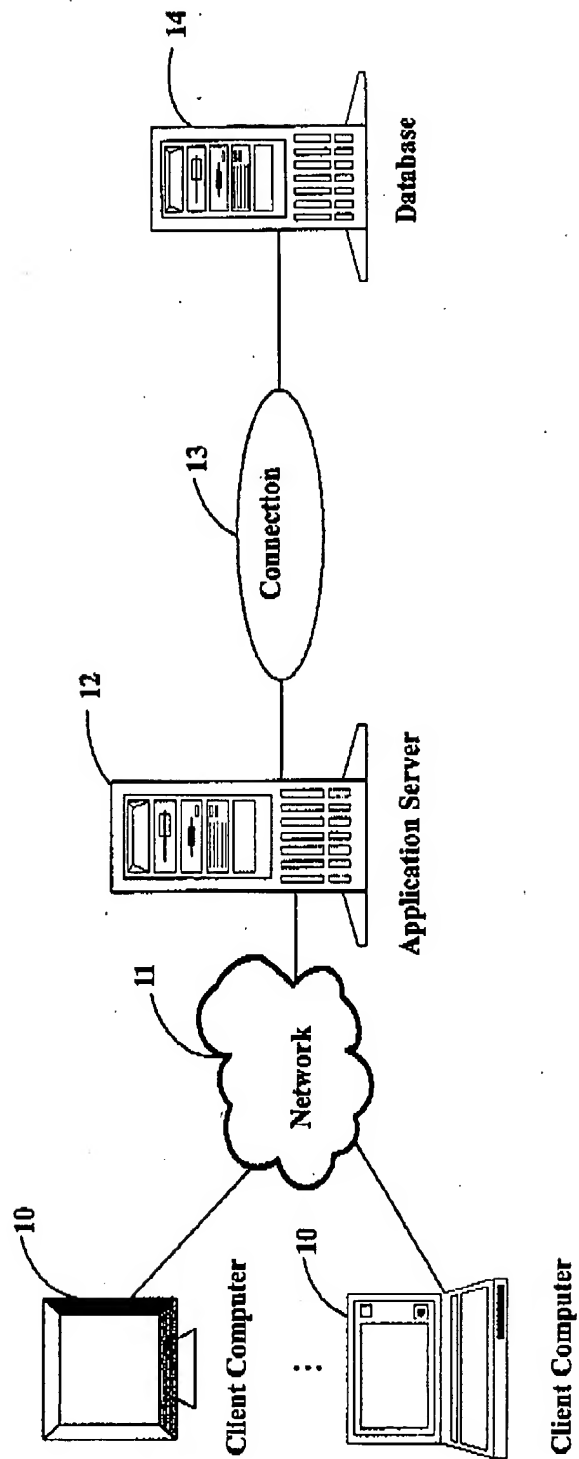
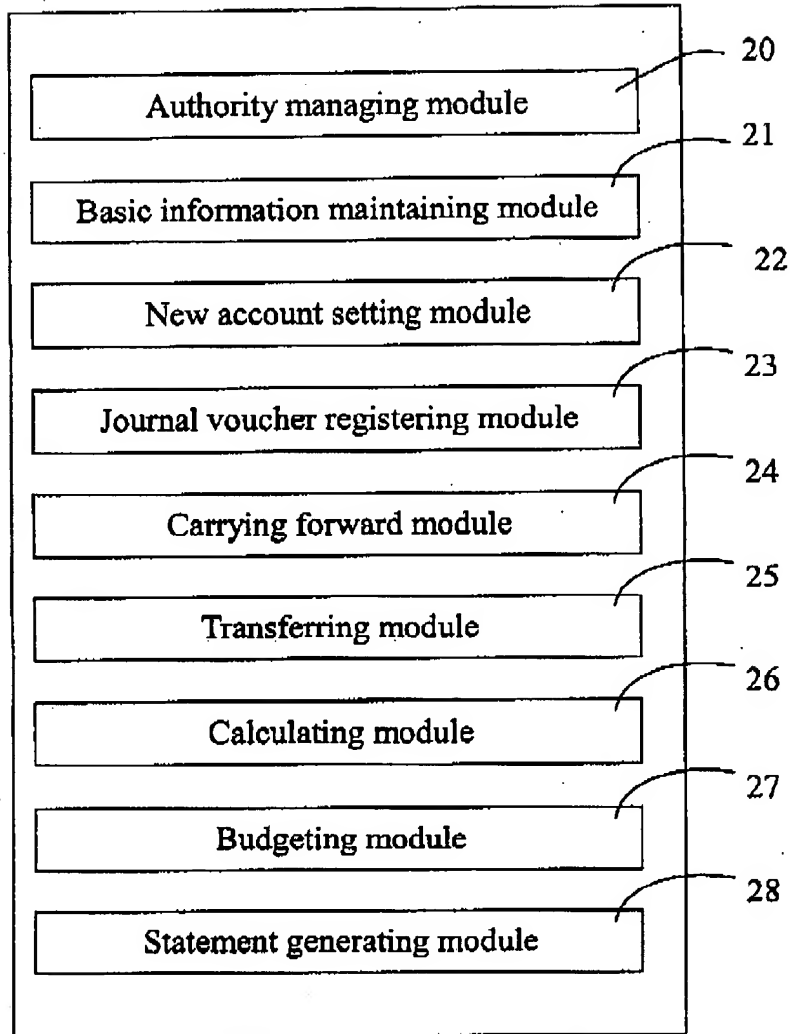
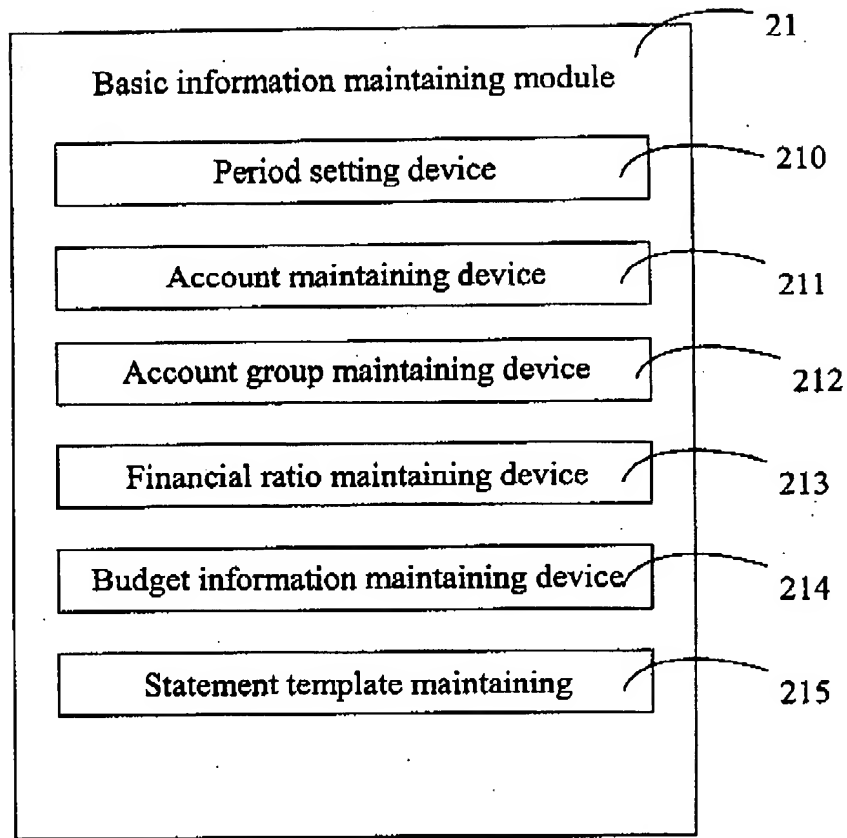


FIG 1

**FIG. 2**

**FIG. 3**

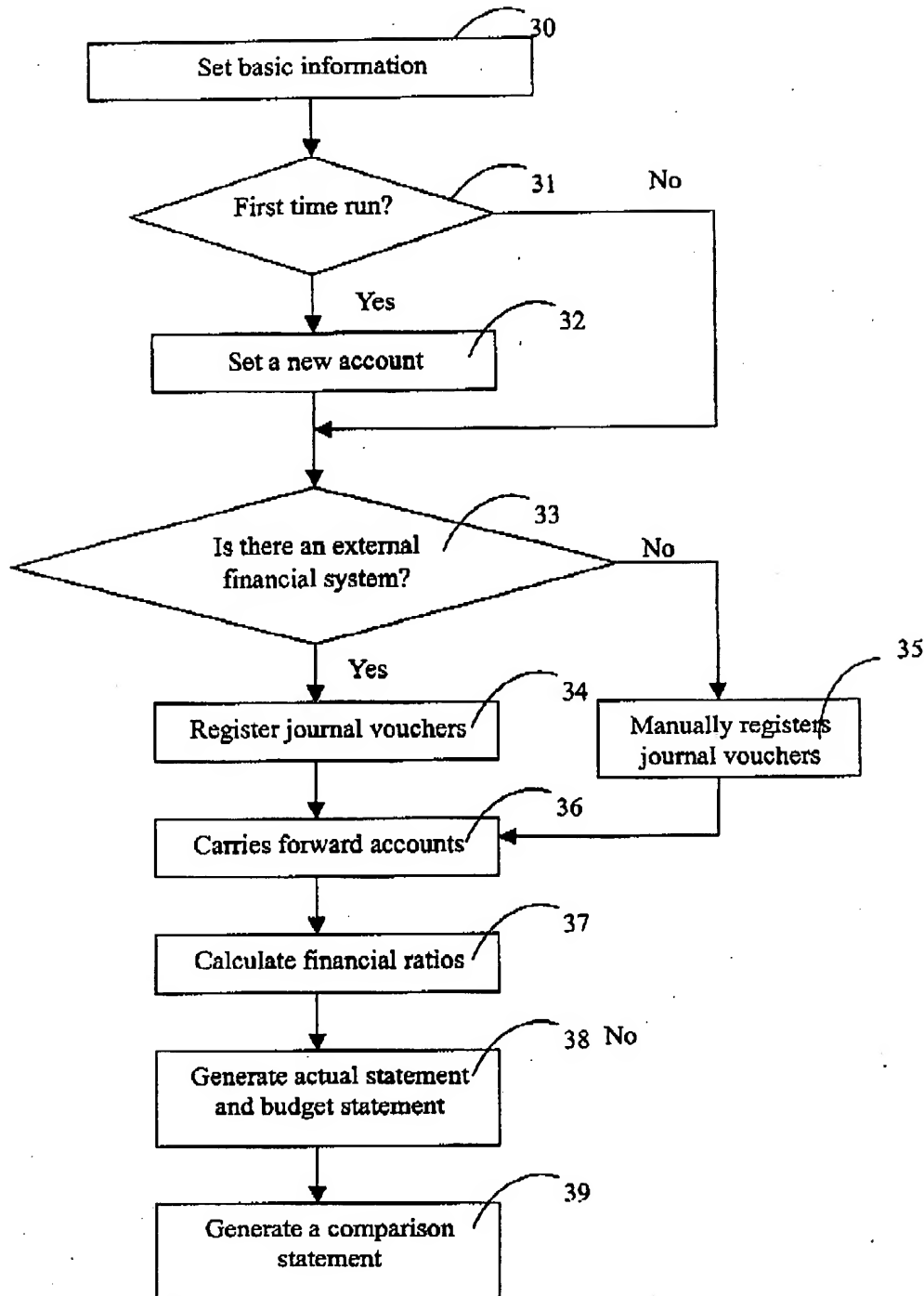


FIG. 4

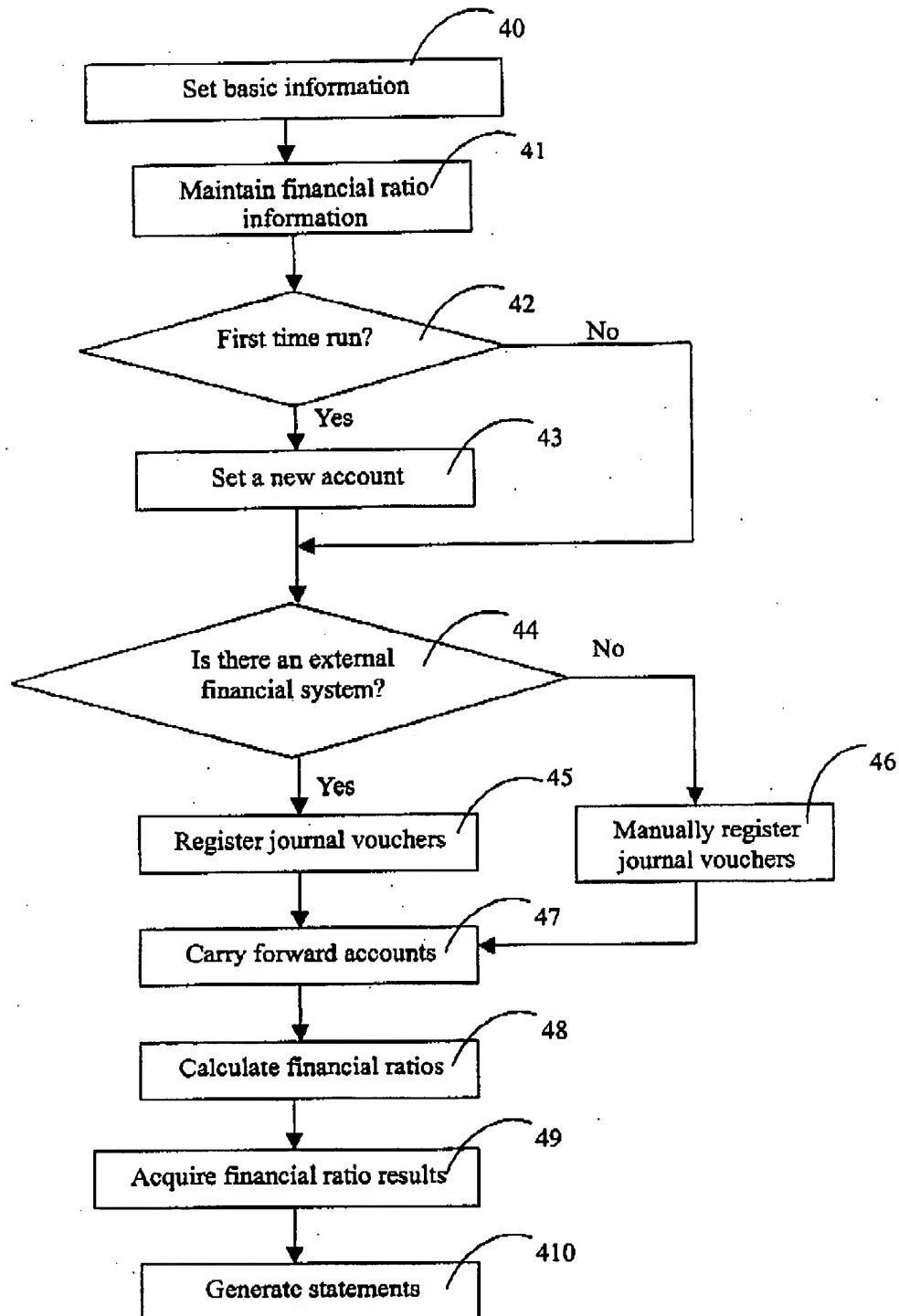


FIG 5